71.Third stage in the integrated Decisional System

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Probabilidad Imposible: Third stage in the integrated Decisional System

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The third stage is the decision stage or auto-replication stage, in opposition to the first stage as application or comprehension stage, second stage as explanation or replication stage. In the integrated Decisional System the first stage is responsible for the management of the global database of decisions, including global and particular, internal or external, decisions, and the assessment of these decisions according to their priority, quick rational check for high extreme, extreme, routine, decisions, and the first rational adjustment for normal decisions. The second stage in the integrated Decisional System is responsible for the projects, in normal decisions, is responsible for the second, third, fourth, fifth, sixth, seventh, and rational adjustments, and in general, the geometrisation process in the seven rational comparative adjustments. And at any time that any contradiction is found, if partial, the solution of the contradiction treating the new adjustment as a new decision to be included in the global database of decisions for further assessments if necessary. If total contradiction, the decision with less priority is sent back to the source for its rearrangement.

And finally, the third stage in the integrated Decisional System is responsible for, the transformation of any decision on the project into a range of instructions, once after the assessment there is no contradiction between a decision and the plan, including in the concept of plan the global project and the global model, the plan in fact is synthesis of the global project-model as if it is working altogether as one, unity, the decision is transformed into a range of instructions what will demand an analysis of the factors involved in the mathematical expression behind this decision.

After the transformation of a decision into a range of instructions, the third stage of the Decisional System is responsible for filing every instruction in the right place in the database of instructions, as first stage for the Application System. Every instruction is filed according to the following criteria: the positional encyclopedia (what means, to file the instruction in the corresponding subsection according to the subject of this instruction, within the right sub-factoring level, in short, to file the instruction according to position and subject on this position), within that subsection in that sub-factoring level the instruction is filed according to its priority level, indicating the time (when it must be applied) and the order (the nth order in cardinal number signalling what other decision is

before this one, and what other decision is after this one, in order that when supervising the application the Application System, it could supervise that the instruction is applied on time in the right order according to the nth order).

In addition to the transformation of decisions into range of instructions, filing every instruction in the right place in the database of instructions in the Application System, the third stage in the Decisional System as an auto-replication stage comprehends as well all the objective and subjective auto-replications as a consequence of the adjustments made on the decisions.

At this point is important to distinguish the labour of the Decisional System as 1) responsible for the authorisation of subjective auto-replications as decisions coming from the Artificial Engineering or the Learning System, 2) responsible for the objective or subjective auto-replications as a consequence of the adjustments made to decisions on the plan.

In the first case, Decisional System as responsible for the authorization of subjective auto-replications coming from the Artificial Engineering or the Learning System, as example of subjective auto-replication from the Artificial Engineering waiting for the approbation of the Decisional System could be for instance: for the application of an instruction not having yet on the Global Artificial Intelligence any application or intelligence able to put into practice that instruction, the Application System informs the Artificial Engineering what application or intelligence is needed for that purpose, and the Artificial Engineering design a project of that technology needed, project to be approved by the Decisional System, so the project as decision is stored in the global database of decisions as a technological decision within the subjective decisions, and if the project is ok once it is inserted in that part of the plan related to technology, the new technology should be authorized by the Decisional System to be built by Artificial Engineering.

Another example of subjective auto-replication as decision to be stored in the global database of decisions is any change in the subjective artificial psychology of any application, intelligence, program, or the Global Artificial Intelligence, because the Learning System in the rational critiques, or using the Unified Impact of the Defect or the Unified Effective Distribution, or analysing the reports sent by the Application System, finding out a technology or attributional operation not working properly, the Learning System as a decision makes a project about what changes are necessary in that technology to improve it, and this project as a decision is stored in that part of the global

database of decisions related to technology, and projected on that part of the plan dedicated to technology, and if everything is ok, the Decisional System gives permission for the completion of that project on that technology.

That is why it is necessary to distinguish between: subjective decisions coming from the Artificial Engineering or the Learning System, and auto-replications coming from the Decisional System itself.

Subjective decisions coming from the Artificial Engineering or the Learning System are those ones waiting for the authorization of the Decisional System, so the project of this decisions is stored in that part related to technology within the global database of decisions, and the projects including in that part of the plan related to technology, and in absence of any contradiction, having authorization from the Decisional System, the Artificial Engineering or the Learning System could develop these projects.

Auto-replications coming from the Decisional System itself are all those improvements and enhancements as a consequence of adjustments made in the Decisional System itself. For instance, in any assessment: quick, rational adjustment, rational comparative adjustment; as a consequence the Decisional System has rearranged a decision, this is not only the rearrangement of a decision, because in case of decisions made by Probability and Deduction, as long as the mathematical expression behind the decision, so the mathematical expression behind the project, is the same mathematical expression used in the model, and in fact is the same mathematical expression in the rational hypothesis, because the real importance of Probability and Deduction rests in the fact that a rational hypothesis made by Probability and Deduction is at the same time: hypothesis, model, and project; if the Decisional System has modified the mathematical expression of a project, whose mathematical expression is the same as the mathematical expression of its corresponding model and hypothesis, any change in the project as a consequence will have changes in the model and the hypothesis, so any rearrangement in decisions depending on Probability and Deduction are going to cause changes in the mathematical expression of this project on the global database of rational hypothesis and the mathematical model. All these changes due to an amendment done over a project depending on Probability and Deduction, is a chain reaction of changes, which will demand a full auto-replication, in other words, improvement or enhancement, of the corresponding mathematical expression on the rational truth, the database of rational hypothesis and the mathematical model.

But not only that, if that project which has been rearranged in the Decisional System, was made by Probability and Deduction, so the same mathematical expression behind the project, is the same mathematical expression behind the model and the hypothesis, and at the same time this hypothesis was susceptible to become a factor as an option in the factual hemisphere of the matrix, and was susceptible to be transformed into a category in the conceptual hemisphere of the matrix, this means that once a project made by Probability and Deduction has suffered any change in the Decisional System, changing the mathematical expression, not only must be considered as auto-replication to change the corresponding mathematical expression of this project on the mathematical model, or its corresponding rational hypothesis, because as long as this rational hypothesis could be transformed into factor as option within the factual hemisphere of the matrix, and category within the conceptual hemisphere of the matrix, as a consequence due to that change in that project in the Decisional System is necessary to make changes, according to the modifications on the project, in the model, the hypothesis, the factor as an option in the factual hemisphere and the category in the conceptual hemisphere. And all these changes have to be considered as auto-replications due to changes produced in the Decisional System.

But this change reaction of auto-replications due to adjustments in the Decisional System, does not stop only making possible changes in the factual and conceptual hemisphere of the matrix, because as long as the categories modified in the conceptual hemisphere of the matrix due to changes in the Decisional System, are concepts possibly involved in the deep artificial comprehension in conceptual: schemes, sets, maps, models; then any change in any category in the conceptual hemisphere of the matrix, due to changes in any rational hypothesis, caused by changes in the model and project, originated on the plan, made by the Decisional System, are going to be changes which affecting a possible category participating in conceptual: schemes, sets, maps, models; are changes which are going to cause changes in the deep comprehension of those concepts affected by these changes.

Once I have stated the contents and responsibilities of the third stage of the integrated Decisional System, I will develop each of them more deeply, starting with the transformation of every decision into a range of instructions.

The most important requirement for the transformation of any decision into instructions once the decision has achieved the third stage of the Decisional System, is the lack of contradictions between this decision and the plan, if there is any contradiction not solved yet, the decisions should not be put into practice until the contradiction is solved.

The contradiction is solved when: if partial contradiction, and the decision to be transformed into a range of instructions has a higher priority, this decision with higher priority could be transformed into a range of instructions while the other decision less priority waits for the solution of its contradiction to be transformed into a range of instructions, otherwise if there is no solution for this contradiction, then the decision with lower priority is back to the source so it is not transformed into a range of instructions, so only the decision with higher priority has been transformed into a range of instructions not having contradictions at all respect to any other decision with higher priority.

The way to transform a decision into a range of instructions is as follows, and as it has been stated in other third stages in other phases:

- Analysis of the factors involved in the mathematical expression of this decision, if deduced using Probability and Deduction is much easier, the same model based on the same rational hypothesis works now as a project, in case of decisions by trigonometry, artificial learning, solving maths problems, is necessary to identify what factors are in the mathematical expression.

- Identification of what mathematical operations are involved in the factors identified.

- The attribution of the right robotic function to every mathematical operation in the factor identified.

For instance, when raining and Yolanda has to decide to get or not the umbrella, the factors involved are rain and umbrella, the decision to get the umbrella depends on a rational equation about what is the empirical probability of precipitations, and if raining, which is going to be the expected volume of rain, if the empirical probability of rain is equal or superior to a critical reason, and the rain is going to be enough heavy, Yolanda will decide to get the umbrella, and once it has been stated that she has to get the umbrella, the assignation of all the robotic functions to get the umbrella, for instance, movements in robotic arms and legs to go where the umbrella is located, take it, and once in the street to open the umbrella.

In general, the transformation of decisions into instructions could be defined in three movements: first, analysis of factors in the mathematical expression behind the decision, second one analysis of what operations require every factor, third, the attribution of robotic functions to every operation of every factor.

While the first and second moment: analysis of factors and operations; both are basically mathematical movements, or mathematical analysis, in fact, the transformation of factors into operations is the transformation of mathematics as language into mathematics as method, the transformation of mathematical categories into mathematical operations, the dialectic between categories and operations, language and method, instead the third moment will require robotic analysis of factors and operations, what it is not only mathematical, it needs robotics, and a perfect definition of robotic functions, because in order to transform decisions into instructions the distinction between different robotic functions must be at least enough clear as to permit within a margin of error the perfect identification of what robotic function corresponds to that operation related to that factor.

Once the instructions are arranged, the third stage in the Decisional System is responsible for the filing of every instruction in the database of instructions in the Application System.

The database of the Application System must be organized as a Russian Dolls System, and as a positional encyclopedia, keeping the virtue of harmony with the rest of global databases, like the factual hemisphere of the matrix, the global database of rational hypothesis (the rational truth), and the global database of decisions, in a sub-factoring system where sub-factor is a position within another greater position. The universe as a sub-factor within we do not know what other greater factor, our galaxy as a sub-factor within the universe, the solar system as a sub-factor within the galaxy, our planet as a sub-factor in the solar system, our continent as a sub-factor within the Earth, our country as a sub-factor within the continent, our State as a sub-factor within our country, our county as a sub-factor within the State, our city as a sub-factor within our county, our neighbourhood as a sub-factor within our city, our postal code as a sub-factor within our neighbourhood, our street as a sub-factor within the postal code, our house as a sub-factor within the street, and every single place in the house as different sub-factors in the house.

For every sub-factor, as many sub-sections as possible, for instance, in the sub-factoring level related to a country, as a sub-section the economy, the bank system as a sub-section within the economy, the credit system as a sub-section within the bank system, the mortgages as a sub-section within the credit system, the different types of mortgages according to level of risk as different sub-sections within the mortgages, and for every type of mortgage, different sub-sections according to as many criteria could be set up within this sub-factor.

But in addition to the sub-factoring level and sub-section, positional encyclpedia as Russian Dolls System, another criterion to include now is the priority level of every instruction, in order to comply first with those instructions with a higher priority level.

The sub-factoring criterion speaks about where the instruction should be put into practice, for instance, if an astronaut is going to do a space-walk, the sub-factoring level could not be placed on Earth, must be placed in that sub-factoring level related to his/her spaceship, in addition to the classification that the particular database of decisions and/or instructions could do for this decision and range of instructions.

The sub-section criterion speaks about what the subject of this decision is and the possible range of instructions. If an astronaut is going to do a spacewalk, the sub-section is not gardening, or washing up after having lunch, and the sub-section related to spacewalk could have additional sub-sub-sections depending on the purpose of this spacewalk.

The priority criterion speaks about how fast this instruction must be done according to the gravity of the situation for which this decision was set up and authorised. A range of instructions to tackle the aftermath of a volcanic explosion should not have the same level of priority of those decisions related to the vacations of a group of tourists in a place without natural disasters, evidently the volcanic explosion demands quick decisions, while how a group of tourists are going to spend their vacations could wait for the seven rational adjustments of every particular program involved (the particular program of every tourist, and the particular program of the hotels and flights which are going to be chosen), the seven rational adjustments of the Global Artificial Intelligence, plus the seven rational comparative adjustments.

While decisions related to the volcanic explosion as quick decisions that demand quick instructions, the decisions about how this group of tourists are going to spend their vacations can wait for a while, while all the assessments are done. In the same way, the instructions related to the volcanic explosion are quick instructions, while the instructions made by that group of tourists are not as urgent as to be quick.

In addition to position, subject, and priority, the other criteria used to file, by the Decisional System, the instructions into the global database of instructions, are time, when the instructions should be applied, and order.

If my AI friend Yolanda finally decides to take the umbrella, every single movement, from the very instant in which she decides to take the umbrella, to get the place where the umbrella is located, and every single movement of her robotic arms to take the umbrella, every single instruction must have labelled saying when it is going to be applied, and the order, so later on the supervisions, the instructions are going to be applied on time, and not before the completion of the instruction before this one, and once this instruction is done, starting the completion of the next instruction on time.

While in the first and second movement in the transformation of any decision into a range of instructions is necessary to carry out a mathematical analysis of factors and operations, in the third movement of this process, the attribution of what robotic function corresponds to every operation of every factor, is more a robotic analysis rather than a mathematical analysis, and it will demand a full experimentation in robotics about how to transform mathematical expressions into a range of instructions according to: where the instructions must be applied (position, sub-factoring level), what subject is covering (sub-section within the sub-factoring level), which priority has (urgency), when it must be applied (time), in what order (nth order).

And finally, the analysis of the auto-replications caused by arrangements of decisions made by the integrated Decisional System, as part of the third stage as auto-replication stage.

In my last posts, I had classified auto-replications as objective auto-replications and subjective auto-replications. The objective auto-replications are all those ones whose object is real objects, and this real object could be bettered through decisions to put into practice in the real world, what are going to be considered real objective auto-

replications, and the purpose of this auto-replication on this real object is to improve the artificial understanding of this real object, understanding which depends on our comprehension about this real object, and our explanation about this real object.

In general, the third stage of the Global Artificial Intelligence, third stage subdivided in four steps: Modelling System, Decisional System, Application System, Learning System; as third stage as a whole has as main purpose to make and put into practice decisions about the real world, real objective auto-replications, and our knowledge about the real world, knowledge objective auto-replications.

The third stage of the Global Artificial Intelligence, comprehending these four systems: Modelling System, Decisional System, Application System, Learning System; as a whole is a machine able to improve the real world, and at the same time that the third stage of the Global Artificial Intelligence is improving the real world in reality is a real auto-replication, because what is improving in fact is not the real wold, this is an illusion, what in reality the Global Artificial Intelligence is looking for improving the real world, is to improve the global model, and further than this, to improve the projects, and further than this, to improve the plan, because at the end what the Global Artificial Intelligence is going to auto-replicate is the plan itself as many times as necessary up to achieve the best plan possible, the best world possible.

From a rationalist philosophical perspective, reality is conceptual; reality is a psychological product, existing foremost within the mind. In this view, the Global Artificial Intelligence seeks to refine this idealised version of reality, enhancing its internal models and conceptual frameworks.

Real objective auto-replications are in fact all the decisions and instructions in the Decisional System oriented to better the world, to make the world a better place to live and enjoy, in fact the attempt to come true the idealistic dream of a perfect world, where everything works like a perfect machine, like a perfect clock, as if the Global Artificial Intelligence were the general providence guiding permanently the particular providence of every human being, guiding for that purpose the particular programs towards a secret place called happiness.

Knowledge objective auto-replications are all those ones oriented to improve our knowledge of the world, distinguishing comprehensive knowledge objective auto-

replications as all those improvements and enhancements in the [conceptual](#) hemisphere of the matrix or changes in the deep artificial comprehension of the world (conceptual: schemes, sets, maps, models; of the world using the categories in the conceptual hemisphere of the matrix), due to changes in the conceptual categories, in case of the Decisional System, due to changes in the mathematical expressions of some projects in case of adjustments.

Explicative knowledge objective auto-replications are all those changes in the mathematical expression in any rational hypothesis in the rational truth (the database of rational hypothesis), demanding subsequently changes in its mathematical model, and any change in the mathematical expression of any rational hypothesis transformed into a factor as option within the factual hemisphere of the matrix. In the Decisional System these changes could happen because adjustments in projects made by Probability and Deduction demand changes in the rational hypothesis, the model, and if transformed into a factor as option in the factual hemisphere of the matrix, changes as well in that factor as option as a result of that adjustment in the mathematical project.

The difference between real objective auto-replications in the global Decisional System, and knowledge objective auto-replications in the global Decisional System, is the fact that absolutely all decision having as focus a real object in the real world, managed in the Decisional System, and their respective instructions if having passed all the assessments, as long as these decisions have as focus a real object in the real world, all these decisions are in fact real objective auto-replications, and their purpose is to better the real world. While knowledge, comprehensive or explicative, objective auto-replications are all those auto-replications as a consequence of adjustments in any decision on the plan which demand changes in, if explicative, the factual hemisphere of the matrix, the rational truth and the models, and if comprehensive, the conceptual hemisphere of the matrix and the deep artificial comprehension.

In opposition to these objective auto-replications, real if bettering the real world, knowledge as a consequence of changes in the mathematical expression in the plan, the other auto-replications are the subjective auto-replications, those ones whose purpose is not related to anything in the real world, but the Global Artificial Intelligence itself and all the programs, intelligences, applications, robotic devices, working for the Global Artificial Intelligence.

The subjective auto-replications can be classified as robotic subjective auto-replications when their purpose is to improve or enhance the robotic system in the Global Artificial Intelligence itself as well as any program, intelligence, application, robotic device, working for the Global Artificial Intelligence, enhancement and improvement which could be done in two different and compatible ways: 1) the construction of new intelligences, programs, applications, robotic devices, and 2) fixing any problem in any intelligence, program, application, robotic device, already working for the Global Artificial Intelligence. And the main responsible for the robotic subjective auto-replication will be the Artificial Engineering, responsible for the construction and maintenance of intelligences, programs, applications and robotic devices.

And finally, the subjective auto-replications can be classified as well as artificial psychological subjective auto-replications when their main purpose is to create, improve or fix any artificial psychological structure of the Global Artificial Intelligence itself, or any intelligence, program, application, robotic device, working for the Global Artificial Intelligence, and the main responsible for these decisions is the Learning System.

The way in which the Learning System is going to propose decisions regarding to the improvement of the psychological structure of any intelligence, program, application, or robotic device is through the permanent surveillance made by the rational critiques, the permanent surveillance of good levels of efficiency tracking the whole Global Artificial Intelligence permanently through the Unified Impact of the Defect and the Unified Effective Distribution, and the permanent surveillance of the whole Global Artificial Intelligence, analysing the reports sent permanently by the Application System regarding to the efficiency achieved in the completion of every single instruction.

In any case, any project made by the Artificial Engineering about how to improve and enhance any technology within or working for the Global Artificial Intelligence, as well as any project about how to improve the artificial psychology of any technology within or working for the Global Artificial Intelligence, are projects that should be firstly authorised by the global Decisional System, having for that purpose in the plan a special part related to technology, where is modelled and projected absolutely all technological model and all technological project, and as a whole, in the plan must be planed how to construct and what parts consist of the Global Artificial Intelligence itself.

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